



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,865	07/09/2003	Fritz Gestermann	22133-00005-US	8164

30678 7590 02/03/2006

CONNOLLY BOVE LODGE & HUTZ LLP
SUITE 800
1990 M STREET NW
WASHINGTON, DC 20036-3425

EXAMINER

WILKINS III, HARRY D

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,865

Applicant(s)

GESTERMANN ET AL.

Examiner

Harry D. Wilkins, III

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 5,11,13-15 and 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-10,12 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08).
Paper No(s)/Mail Date 10/9/03, 12/4/03.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I (claims 1-12 and 16) in the reply filed on 14 October 2005 is acknowledged. The traversal is on the ground(s) that the two groups were related as product and method of use. This is not found persuasive because The claim groups are related as apparatus and method of operation. As shown in the MPEP in section 806.05(e), restriction is proper between such groups.
2. Applicant's election with traverse of the species of figures 1 and 2 in the reply filed on 21 December 2005 is acknowledged. The traversal is on the ground(s) that the embodiments all share the features in common that are recited in claim 1. This is not found persuasive because each of the disclosed species is a distinct form covered by the generic claim. Just because the species are covered by the generic claim does not mean that all of the distinct species are proper for examination together.
3. Claims 5 and 11 do not read on the elected species. As such, claims 5 and 11 are withdrawn from consideration.
4. Claims 3 and 9 contain alternatives (corrugated, zigzag-shaped and rectangular cross section) of the different species. Applicant elected the species of figures 1 and 2, which had a rectangular cross section. As such, claims 3 and 9 are treated on their merits only with respect to the elected species.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 6, 7, 9, 10 and 12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rohde (DE 484,761).

Rohde anticipates the invention as claimed. Rohde teaches (see figures 1-2) a metal electrode including at least one orifice that is provided with a guide capable of conducting gas away from the electrode.

Regarding claim 7, the ducts of the metal electrode are “angled”.

Regarding claim 9, the electrode had a rectangular cross section.

Regarding claim 10, the electrode of Rohde would have been expected to inherently have a depth of at least 1 mm

Regarding claim 12, Rohde teaches (see figure 2) an electrochemical cell with the claimed metal electrode.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1742

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rohde (DE 484,761).

Rohde is silent with respect tot the total cross-sectional area of the orifices.

However, it would have been obvious to one of ordinary skill in the art to have optimized the amount of area devoted to the orifices in order to maximize the electrode contact area compared to the amount of gas ducting provided by the orifices.

9. Claims 1-4, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faita (US 5,770,035) in view of Rohde (DE 484,761).

Faita teaches an electrolytic cell suitable for the chlor-alkali membrane process including an anode compartment (3) having a metal anode (4), a cathode compartment (2) with a gas diffusion cathode (8) and an ion exchange membrane (1) arranged between the anode compartment and the cathode compartment.

Faita fails to teach that the metal anode had at least one orifice provided with a guide structure capable of conducting gas formed to a side of the anode facing away from the cathode compartment.

Rohde teaches (see 1st paragraph, orally translated by USPTO and figures 1 and 2) a metal electrode for use in a diaphragm/membrane cell wherein the electrode had orifices for conducting gas formed to a side of the electrode facing away from the opposite compartment.

Therefore, it would have been obvious to one of ordinary skill in the art to have substituted the metal electrode of Rohde for the expanded metal mesh anode of Faita

Art Unit: 1742

because the metal electrode of Rohde provided for easily removing the gas formed in an electrolytic cell away from the electrode and diaphragm/membrane.

Regarding claim 2, Rohde is silent with respect tot the total cross-sectional area of the orifices. However, it would have been obvious to one of ordinary skill in the art to have optimized the amount of area devoted to the orifices in order to maximize the electrode contact area compared to the amount of gas ducting provided by the orifices.

Regarding claim 3, the electrode had a rectangular cross section.

Regarding claim 4, the electrode of Rohde would have been expected to inherently have a depth of at least 1 mm

Regarding claim 12, Faita in view of Rohde teach an electrochemical cell with the claimed metal electrode.

Regarding claim 16, Faita teach using a titanium-palladium alloy for the anode and a carbon-based gas diffusion cathode. One of ordinary skill in the art would have been motivated to make the electrode of Rohde from the same material as taught by Faita in order to maintain the same electrocatalytic activity.

Conclusion

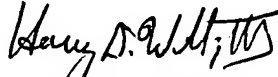
A full English translation of the Rohde document has been requested by the Examiner and will be forwarded to Applicant's representative as soon as it is received by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D. Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-F 8:30am-5:00pm.

Art Unit: 1742

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Harry D Wilkins, III
Examiner
Art Unit 1742

hdw